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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/341,401	08/23/1999	NAOFUMI YANAGIHARA	450101-4669	5072

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EXAMINER

AN, SHAWN S

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 09/05/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/341,401

Applicant(s)
Naofumi Yanagihara et al.

Examiner
Shawn An

Art Unit
2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jun 24, 2003
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 14-19 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 14-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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DETAILED ACTION

Response to Restriction/Election

1. Applicants elect without traverse, the distinct specie of Fig. 1 which reads on claims 1-8 and 14-19.

Applicants further state that there should be only four distinct species in the present application. However, Examiner respectfully disagrees for at least the following reasons.

Applicants believe that Species I includes Figs. 1, 11, and 12, which reads on claims 1-8, 14-19, and 31-42. In contrast to Applicants' belief, Figs 11 and 12 are third and fourth embodiments employing the weighting processing section (IW * W), before and after the resolution conversion section (16), respectively. Therefore, the Examiner believes an extra burden will be added based on three distinct species, which follows:

Species I - Fig. 1 incorporates conventional IW (14) and W (18);

Species II - Fig. 11 incorporates IW * W (22), before resolution conversion section (16);

Species III - Fig. 12 incorporates IW * W (22), after resolution conversion section (16);

The prior art searching and a prosecution clearly would be a burden based on the three species.

Therefore, the requirement is deemed proper and made **FINAL**.

Drawings

2. Figure 28 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

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Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

4. Claims 1, 14-15, and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Kim (5,737,019).

Regarding claims 1, 14-15, and 18, Kim discloses a digital signal conversion device, comprising:

decoding means for decoding (Fig. 6, 100; Fig. 7, 605) a digital signal of a first format consisting of orthogonal transform coefficients of a predetermined unit;

inverse quantization means (130) for inversely quantizing the decoded digital signal;

resolution conversion means (Fig. 6, DCT converter) for extracting a part of the orthogonal transform coefficients from adjacent blocks of orthogonal coefficients blocks of the predetermined unit of the inversely quantized digital signal, thus constituting a partial block, and converting the resolution;

resolution conversion means (Fig. 7, DCT Mapping) for interpolating the predetermined unit of the inversely quantized digital signal with an orthogonal transform coefficient of a predetermined value, and converting the resolution (col. 15, lines 45-52);

quantization means (650) for quantizing the digital signal processed by resolution conversion; and

coding means (660) for coding the quantized digital signal for generating a digital.

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Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2-8, 16-17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (5,737,019).

Regarding claims 2 and 16, Kim discloses variable length coding (VLC) and VLD. Furthermore, video signal compression scheme being coded at fixed rate or variable rate is well known in the art. Therefore, it would have been obvious for the first format video signal to have a fixed rate and the second format to have a variable rate.

Regarding claim 3, 7, and 17, the Examiner takes official notice that reducing low frequency DCT coefficients are well known in the art for a purpose of reducing the resolution. Therefore, it would have been obvious to reduce the number of DCT coefficients of vertical component of a color difference signal to $\frac{1}{2}$. Furthermore, reducing DCT coefficients of horizontal and vertical components comprising Y (luminance) and U, V, (chrominance) difference signals are also conventionally well known in the art.

Regarding claim 4, the Examiner takes official notice that DCT coefficients constituting line of odd and even fields, and subsequently dropping either odd or even fields as a generated output as a method for reducing resolution is well known in the art.

Regarding claims 5-6 and 8, the Examiner takes official notice that it is well known to have a compressed video signal having a resolution of 720 X 480 or 360 X 240, and a ratio of

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sampling frequency of color difference and luminance signal to be equal to 4:1:1 or 4:2:0 (application specific ratio).

Regarding claim 19, Kim discloses eliminating high frequency components when the image resolution is to be reduced. Therefore, it would have been obvious for the conversion means to interpolate the high frequency side of the orthogonal transform coefficients of the first format digital signal, since the high frequency coefficients are considered less important, and the high frequency components are generally not visible by human eyes.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

- A) Takahashi et al (6,005,623), Image conversion apparatus for transforming compressed image data of different resolutions wherein side information is scaled.
- B) Nakagawa et al (6,078,617), Apparatus and method for coding and decoding video images.
- C) Uenoyama et al (5,982,432), Method and apparatus for converting color component type of picture signals and system for providing picture signals of a required compression format.
- D) Go (6,307,592 B1), Apparatus for converting the format of video signals based on frequency and composition band.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawn An whose telephone number (703) 305-0099 and schedule are Tuesday through Friday.

SSA 

SEPT 25 2003
PATENT EXAMINER

August 28, 2003